



ISDH Neonatal Abstinence Syndrome (NAS) Initiative



7th Annual Prescription Drug Abuse
and Heroin Symposium
October 13th, 2016



NAS DEFINITION



A drug withdrawal syndrome that presents in newborns after birth when transfer of harmful substances from the mother to the fetus abruptly stops at the time of delivery. Most frequently due to opioid use in the mother, but may also be seen in infants exposed to benzodiazepines, and alcohol.

+ NAS Origin

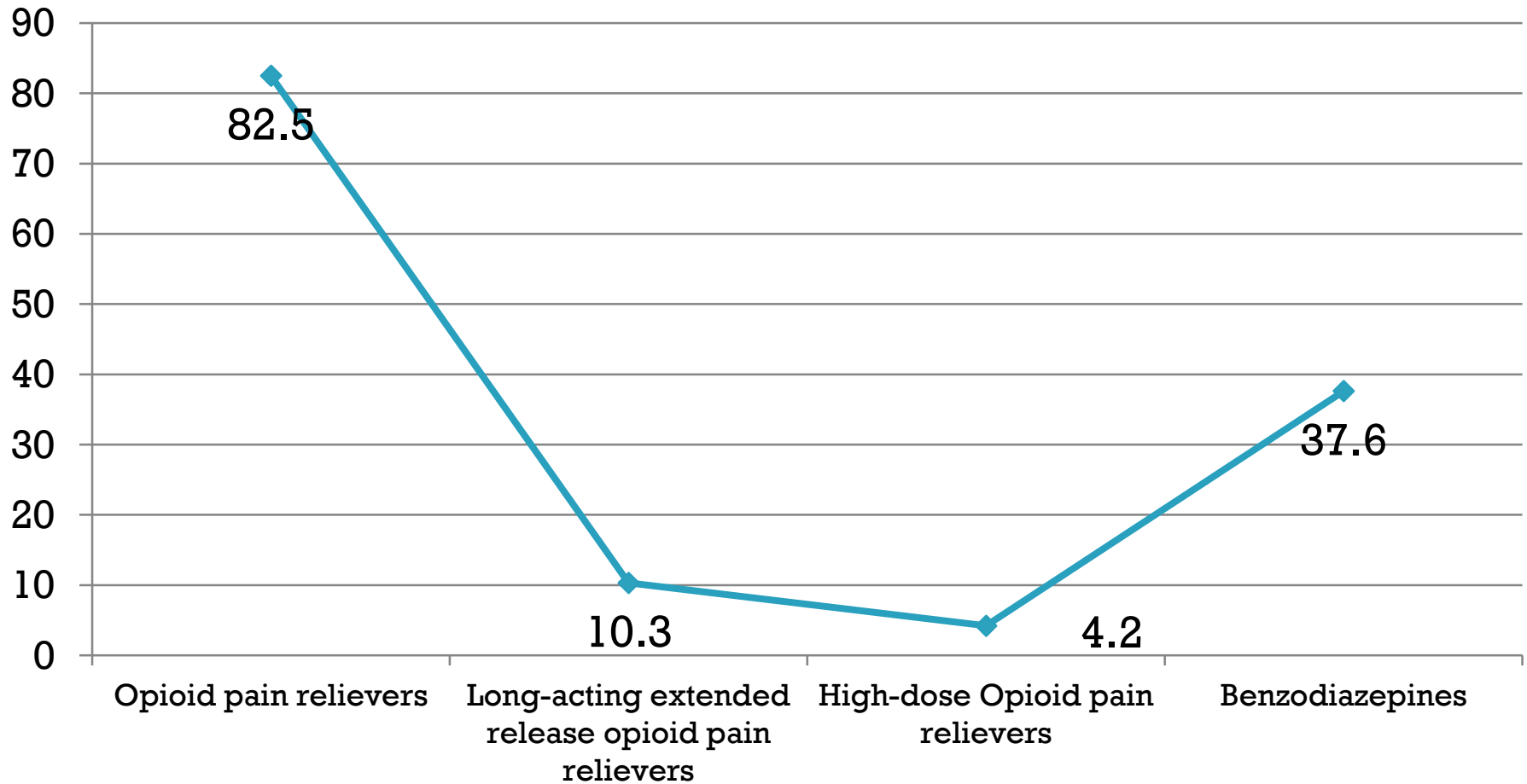
Fetal exposure usually occurs for one of three reasons:

- 1. Mothers are dependent/addicted to opioids, either prescribed or illicit.
- 2. Mothers require prescription opioids for another disease process
- 3. Mothers receive methadone therapy to facilitate safe withdrawal from addiction to prescription or illicit opioids.



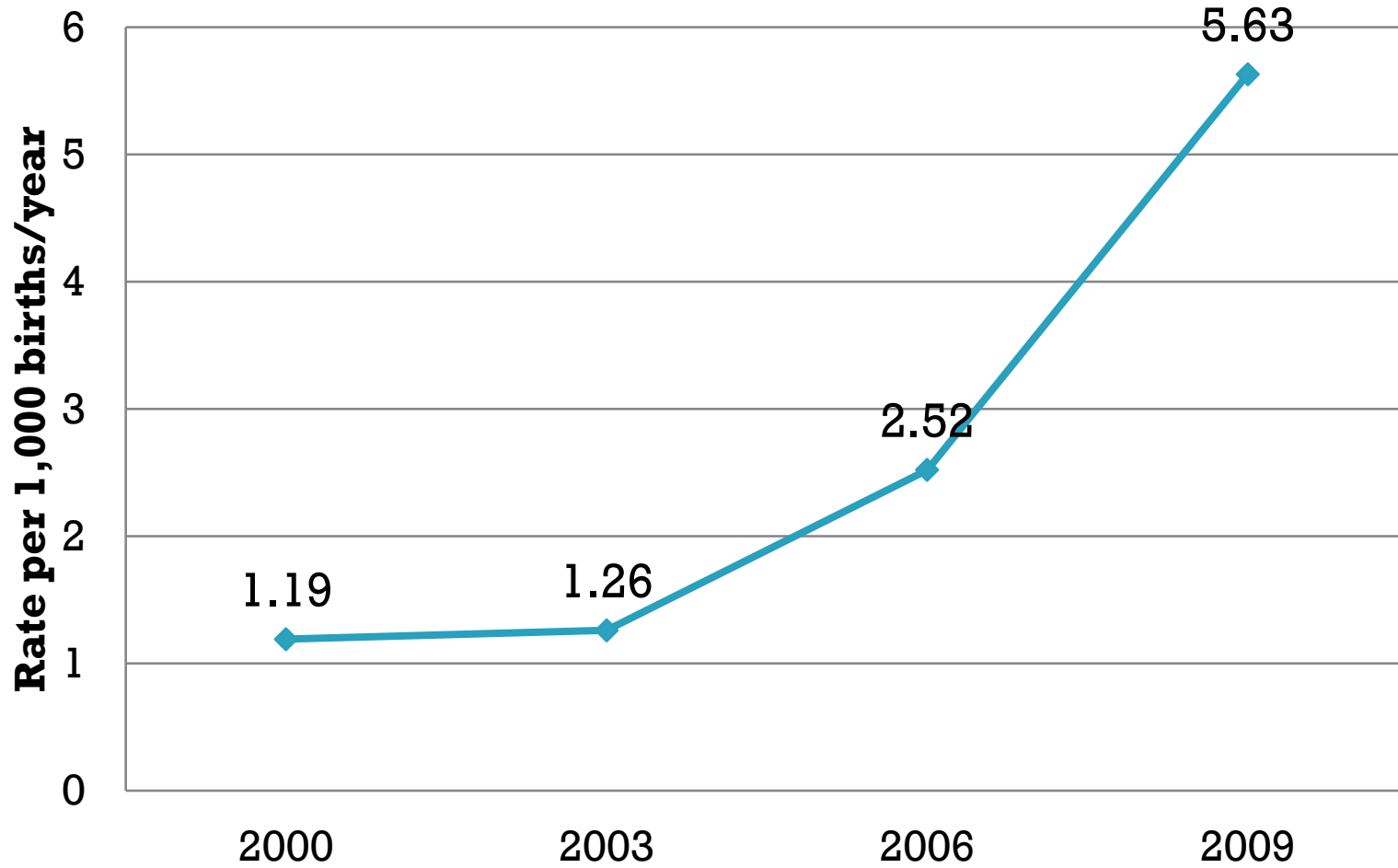
Prescribing Rates per 100 Persons

United States



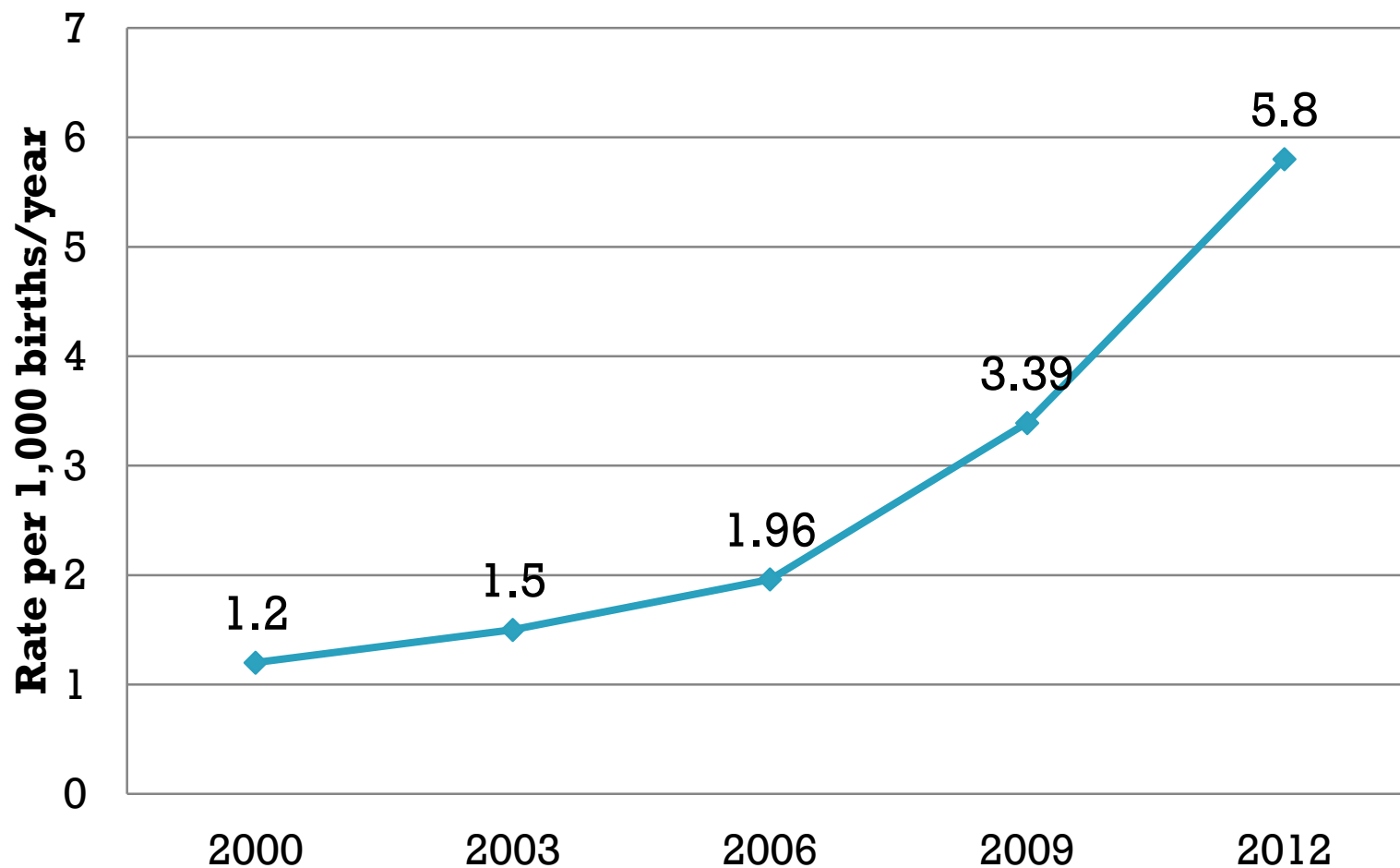


Prevalence of Maternal Opioid Use





Prevalence of NAS





INDIANA



- INDIANA RANKS 9TH NATIONALLY IN PRESCRIBING RATE PER 100 PERSONS FOR OPIOID PAIN RELIEVERS:
- ALABAMA(1): 142.9/100 PERSONS
- KENTUCKY(4): 128.9/100 PERSONS
- INDIANA(9): 109.1/100 PERSONS
- CALIFORNIA(50): 57.0/100 PERSONS
- US RATE: 82.5/100 PERSONS

CDC, 2014

+ INDIANA



- “In 2014, more than 13 million controlled prescription drugs were dispensed in Indiana.”
- Most widely drug categories:
 - Opioids - 50.5%
 - CNS depressants - 29.7%
 - Stimulants - 14.8%



INDIANA



- Indiana Prescription Drug Abuse Prevention Task Force – 2012
- Indiana pain management prescribing emergency rules (adopted by the Indiana Medical Licensing Board on October 24, 2013)
- NAS subcommittee of the Indiana Prescription Drug Abuse Prevention Task Force
- Indiana State Medical Association resolution: Improvement of prevention, screening, and treatment for substance use and abuse during pregnancy



IC 16-19-16:



- The appropriate standard clinical definition of "Neonatal Abstinence Syndrome".
- The development of a uniform process of identifying Neonatal Abstinence Syndrome.
- The estimated time and resources needed to educate hospital personnel in implementing an appropriate and uniform process for identifying Neonatal Abstinence Syndrome.
- The identification and review of appropriate data reporting options available for the reporting of Neonatal Abstinence Syndrome data to the state department, including recommendations for reporting of Neonatal Abstinence Syndrome using existing data reporting options or new data reporting options.
- The identification of whether payment methodologies for identifying Neonatal Abstinence Syndrome and the reporting of Neonatal Abstinence Syndrome data are currently available or needed.



DEFINITION



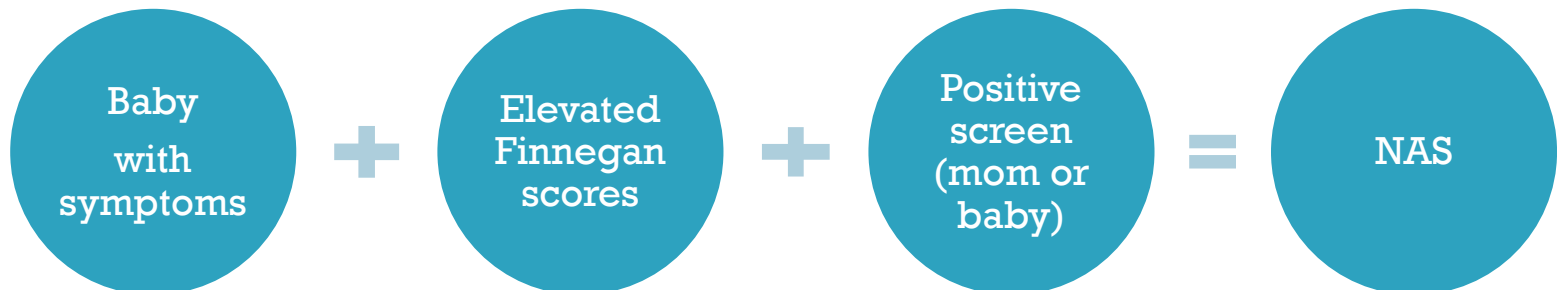


NAS Definition



Babies who are:

- Symptomatic;
- Have two or three consecutive Modified Finnegan scores equal to or greater than a total of 24; and
- Have one of the following:
 - A positive toxicology test, or
 - A maternal history with a positive verbal screen or toxicology test.





IDENTIFICATION PROTOCOL





Recommended Obstetric Protocol



- At the initial prenatal visit:
 - As part of routine prenatal screening, the primary care provider will conduct:
 - One standardized and validated verbal screening; and
 - One toxicology screening (urine) with an opt out.
 - At the discretion of the primary care provider, INSPECT and/or repeat verbal and toxicology screenings may be performed at any visit.



Recommended “Perinatal” Protocol



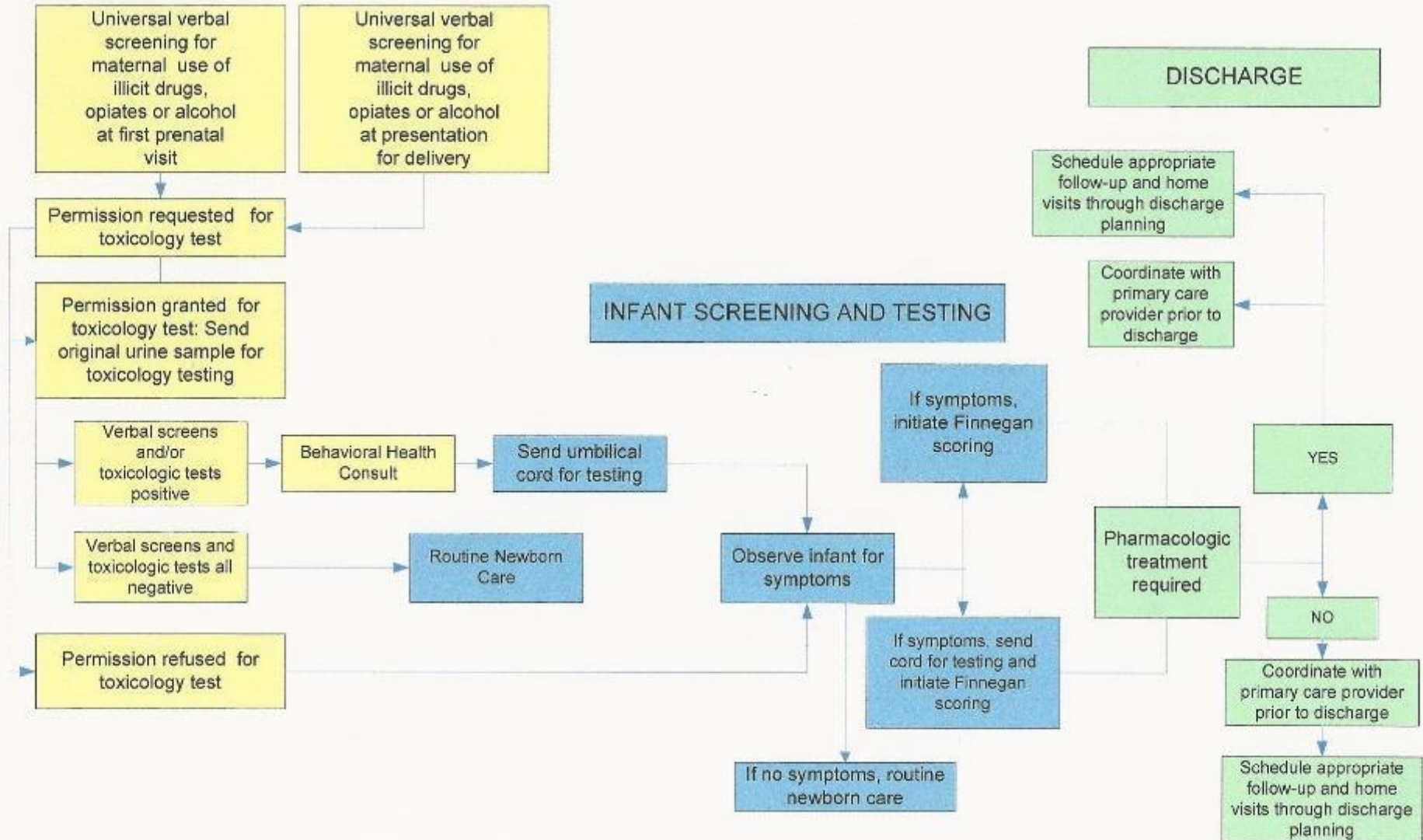
- At presentation for delivery:
 - When the laboring woman arrives at the hospital for delivery, hospital personnel will:
 - Conduct a standardized and validated verbal screening on all women;
 - Conduct toxicology screening (urine) on women with positive or unknown prenatal toxicology screening results;
 - Conduct toxicology screening (urine) on women with a positive verbal screen at presentation for delivery; and
 - Conduct toxicology screening (urine, meconium or cord tissue) on babies whose mothers identified at risk or who had positive toxicology screening results.

Recommended Perinatal Action

Mother's status	Level of Risk for infant	Suggested Action
Negative verbal and toxicology screens	Newborn with no identifiable risk	No testing recommended at birth
Positive verbal screen and/or positive toxicology screen	Newborn at risk for NAS	<ul style="list-style-type: none">• Perform urine and cord tissue toxicology screening at birth• Perform Modified Finnegan scoring• Evaluate maternal support resources
No known verbal or toxicology screen during pregnancy	Newborns with unknown risk	Observe infant for signs <ul style="list-style-type: none">• If signs: Send cord for testing and Perform Modified Finnegan scoring

Neonatal Abstinence Syndrome and In-Utero Drug Exposure Algorithm

UNIVERSAL MATERNAL TESTING





Pilot Process





Pilot Process



- Permissive language in the legislation to develop a pilot process for appropriate and effective models for identification, data collection and reporting related to NAS
- Four hospitals volunteered to test pilot process:
 - Schneck Hospital
 - Columbus Regional Hospital
 - Community East Hospital
 - Hendricks County Hospital
 - Implementation: January 1, 2016

+ Pilot Process



- Common definition of NAS
- Comprehensive and uniform staff training
- Universal screening at first prenatal visit and at delivery
- Screening of newborns whose mothers are identified with positive screens or at risk
- Therapy protocol for providers and educational materials for patients and providers
- Referral for behavioral health support
- Collection of a common set of data

+ Cord Tissue Testing



- Amphetamines

- Cocaine

- Opiates

- Phencyclidine

- Cannabinoids

- Barbiturates

- Methadone

- Benzodiazepine

- Propoxyphene

- Oxycodone

- Meperidine

- Tramadol

- Buprenorphine

+ Data Collection



- Number of cord samples sent
- Number of positive samples
- Substances identified

+ Supportive Resources



- Materials for consumer:
 - Brochures for pregnant women re: substance use
 - Family Guide for taking home an infant with NAS
 - All materials in Spanish and English
- Material for providers:
 - Treatment Protocol



Collaborations



- Medicaid Managed Care Organizations:
 - High Risk Obstetric Case Managers
- Community Mental Health Centers
 - Pilot Centers (scheduled to begin in October)
aligned with four pilot hospitals
- Department of Child Services
 - Meeting with regional managers



What Have We Learned?





Universal Maternal Testing



- Critical in the identification of women dependent or addicted so they can be referred to appropriate services
- Concerns that universal testing would deter women from seeking prenatal care
- Concerns that services are not available for these patients

+ IC 25-1-9-22

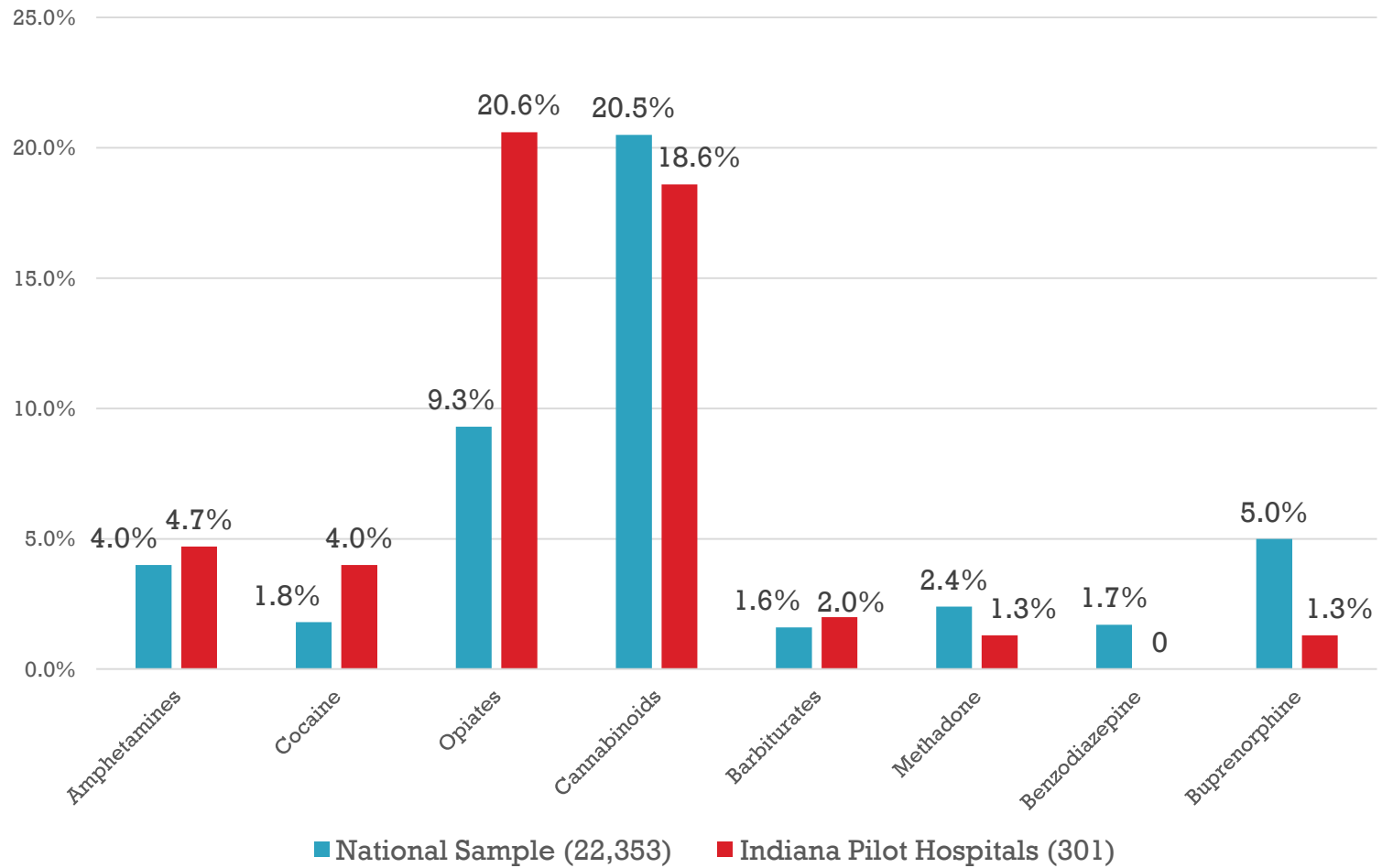


Unless ordered by a court, an individual described in subsection (a) may not release to a law enforcement agency (as defined in IC 35-47-15-2) the results of:

- (1) a verbal screening or questioning concerning drug or alcohol use;
- (2) a urine test; or
- (3) a blood test;

provided to a pregnant woman without the pregnant woman's consent.

Indiana and National Umbilical Cord Positivity Rate 1/1/2016 – 6/30/2016





Pilot Findings



- Drug of choice changes depending on location
- Co-morbidities
- Lack of treatment programs
 - Referrals to where?
 - Interruption of care
- Support services during and after pregnancy
- Changing the culture of providers and pregnant women

+ Future Considerations

- Focus for Medical Community:
 - Education to increase awareness of substance use including FASD
 - Support for ongoing monitoring and referral
- Expand the voluntary pilot process to new hospitals on the neonatal side
 - Prenatal to be postponed until appropriate support services identified
- Expand cord tissue testing to include alcohol
- Continue to support expansion of support services through collaboration at the state and local level
- Consider value of universal screening to intervene early to eliminate and/or mitigate long term developmental impact.

Institute for Health and Recovery Integrated Screening Tool

Women's health can be affected by emotional problems, alcohol, tobacco, other drug use, and domestic violence. Women's health is also affected when these same problems are present in people close to us. By "alcohol," we mean beer, wine, wine coolers, or liquor.

Parents Did any of your parents have a problem with alcohol or other drug use?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Peers Do any of your friends have a problem with alcohol or other drug use?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Partner Does your partner have a problem with alcohol or other drug use?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Violence Are you feeling at all unsafe in any way in your relationship with your current partner?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Emotional Health Over the last few weeks, has worry, anxiety, depression, or sadness made it difficult for you to do your work, get along with people, or take care of things at home?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Past In the past, have you had difficulties in your life due to alcohol or other drugs, including prescription medications?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Present In the past month, have you drunk any alcohol or used other drugs? 1. How many days per month do you drink? _____ 2. How many drinks on any given day? _____ 3. How often did you have 4 or more drinks per day in the last month? _____	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Smoking Have you smoked any cigarettes in the past three months?	YES <input type="checkbox"/>	NO <input type="checkbox"/>

Review Risk

Review Domestic Violence Resources

Review Substance Use, Set Healthy Goals

Consider Mental Health Evaluation

Advise for Brief Intervention

	Y	N	NA
Did you State your medical concern?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you Advise to abstain or reduce use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you Check patient's reaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you Refer for further assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

At Risk Drinking

Non-Pregnant

Pregnant/
Planning
Pregnancy

> 7 drinks / week

> 3 drinks / day

Any Use Is
Risky Drinking

For the best health of mothers and babies, we strongly recommend that pregnant women, or those planning to become pregnant, do not use alcohol, illegal drugs or tobacco. Safe levels of usage have not been determined.

Date: _____

Language: _____

Race: _____

Ethnicity: _____

POTENTIAL IMPACT (AAP, 2013)		Nicotine	Alcohol	Marijuana	Opiates	Cocaine	Meth
Short Term - Birth	Fetal Growth	Effect	Strong Effect	No Effect	Effect	Effect	Effect
	Anomalies	No Consensus	Strong Effect	No Effect	No Effect	No Effect	No Effect
	Withdrawal	No Effect	No Effect	No Effect	Strong Effect	No Effect	No Data
	Neurobehavioral	Effect	Effect	Effect	Effect	Effect	Effect
Long Term Effects	Growth	No Consensus	Strong Effect	No Effect	No Effect	No Consensus	No Data
	Behavior	Effect	Strong Effect	Effect	Effect	Effect	No Data
	Cognition	Effect	Strong Effect	Effect	No Consensus	Effect	No Data
	Language	Effect	Effect	No Effect	No Data	Effect	No Data
	Achievement	Effect	Strong Effect	Effect	No Data	No Consensus	No Data